

# *Linking embeddedness to physical career mobility: How Brexit affected the preference of business, economics and management academics for leaving the UK*

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# Linking embeddedness to physical career mobility: How Brexit affected the preference of business, economics and management academics for leaving the UK

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## ABSTRACT

In this study, we use embeddedness and boundaryless career perspectives to investigate the extent to which Britain's withdrawal from the European Union ('Brexit') led business, economics and management academics to consider emigrating. Using a representative survey of two partially overlapping groups, we find that the impact of Brexit was surprisingly broad and nuanced. In particular, individuals who were born in the UK, but had obtained citizenship of another country, and foreign-born academics who obtained UK citizenship prior to the Brexit referendum have considered leaving the country, implying a broad discontent from mobile and less embedded individuals. Surprisingly, we did not find that the reputation of the institution where participants work, or differences in levels of academic seniority, influenced whether they were considering emigrating. More productive researchers are more likely to have considered emigrating, suggesting that Brexit may lead to a 'hollowing out' of UK research in the long term. However, personal circumstances, such as having children, or length of tenure, also entered into scholars' intention to emigrate. The results imply that managers should act to address the potential losses, and policy makers need to support the higher education sector, to ensure its sustainable competitive performance.

## 1. Introduction

The United Kingdom (UK)'s exit from the European Union (EU) has been a reality since the outcome of the referendum on June 23rd 2016, and the withdrawal agreement, cutting ties wherever possible, which came into force on 31st January 2020 – nearly 50 years after UK accession to the (then) European Economic Community. The diverse nature of the member states' labour forces, the UK's relatively low levels of unemployment compared to many EU member states, and a highly mobile internal labour market made the UK an important destination for migrants from the EU (Migration Observatory, 2022). Indeed, EU citizens made up about 8 % of the total UK labour force in February 2020, while non-EU, non-British, residents accounted for 4.6 % (ONS (Office for National Statistics), 2022). EU citizens enjoyed free movement to

and from the UK prior to the enforcement of the withdrawal agreement (Salt and Brewster, 2022), benefiting the UK economy (Dhingra et al., 2017). However, how migrants have been perceived is a contentious political issue (Hainmueller and Hiscox, 2007), associated with cultural challenges and 'sovereignty' (Portes, 2022). Concerns regarding the impact of migration from nations within the EU was one of the main issues in the debate leading to Britain's exit from the EU (Kerr and Śliwa, 2020; Miller, 2019), even though qualified migrants bring diversity to the host country and proactively contribute to the development of human capital in organisations (Morris et al., 2016; Stahl et al., 2016; Hajro et al., 2022).

Higher Education (HE) in the UK is an internationalised part of this labour market: according to the Higher Education Statistics Agency (HSEA), the proportion of EU citizens is more than double that of the

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national average, at 17 % of the total, with over 30 % of academic staff being non-UK nationals (HESA, 2021). The HE sector is one of the most globally focused industries with national economies deriving substantial direct economic benefits: in the UK, the sector generated £42.4 billion in revenues in 2019–20 (HESA, 2021), it is a major employer, and has significant links to wider innovation ecosystems (Granstrand and Holgersson, 2020; Heaton et al., 2019). Prestige and capability are embodied in institutions and their staff, with policy makers highlighting the importance of attracting the best talent. In terms of governance, UK institutions have considerable autonomy and, within limits, can set their own salaries (Aghion et al., 2010).

Given the importance of the HE sector, policies related to human capital have been of particular interest. Thus, there has been some debate about a ‘brain drain’ resulting from Brexit (Helm, 2020). Mayhew (2022) argues that Brexit’s negative impact on academics will become more apparent in the long run. So, there is a pressing need to advance our understanding of how Brexit has influenced individual academics’ migratory intentions.

In this context, the notions of boundaryless careers and social embeddedness offer an appropriate lens for examining career mobility as they accounts for “sequences of job opportunities that go beyond the boundaries of single employment settings” (DeFillippi and Arthur, 1994, p. 307). While boundaryless careers has been discussed in a number of different ways (Arthur and Rousseau, 1996; Kiazad et al., 2020), Sullivan and Arthur (2006) suggest differentiating between physical and psychological mobility. Psychological mobility refers to one’s orientation towards changing employment whereas physical mobility includes movements across boundaries, such as organisations, occupations, industries, and geographical locations.

Cerdin and Brewster (2014) explore the motivation of highly educated individuals seeking job opportunities in foreign countries, finding that skilled individuals emigrate because of job opportunities, career development and income perspectives and may then become embedded in the country of residence as it represents a good combination of communities and career choices which the individual would sacrifice by leaving the host country. Socio-economic conditions influence people’s perceptions of mobility alternatives (Feldman and Ng, 2007). However, the question of whether and how embeddedness influences high skilled migrants’ intentions to leave a job and host country, following Brexit, remains unresolved. The answers are essential to guide policy makers and managers addressing academics’ mobility choices.

We therefore extend our understanding of the impact of foreign academics’ embeddedness in a host country on their migratory intentions to assess the effects of Brexit on academics’ social embeddedness and physical career mobility. In doing so, we ground our study in the embeddedness perspective, “the combined forces that keep a person from leaving his or her job” (Yao et al., 2004, p. 159) and DeFillippi and Arthur (1994) idea of a boundaryless career orientation.

We use survey data from business, management and economics’ scholars working in the UK, linked to information on websites, the Research Excellence Framework (REF) and academics’ publications. Thus, we provide a nuanced insights into the role of academics’ personal and career related characteristics that lead them to consider leaving Britain because of the country’s decision to leave EU. The analysis is grounded in descriptive data and probit models.

Prior research on academic mobility, embeddedness and the impact of Brexit have focused on how this shock has impacted on academic’s sense of citizenship and belonging. Using semi-structured interviews, Courtois and Sautier (2022) found that non-UK born early career academics were mostly exposed to the aftermath of the Brexit referendum due to the risk of facing prolonged precarity. While this concern was shared by most interviewees across all academic fields, those in Science, Technology, Engineering and Mathematics (STEM) fields expressed lower levels of insecurity thanks to higher chances of moving to private sector jobs, mostly outside the UK. Notwithstanding, prior research (van der Wende, 2015) shows how STEM academics may be more affected by

Brexit as compared to social science peers since potential challenges to international mobility may hamper scientific innovation capabilities, e. g. collaborations and movement across foreign laboratories.<sup>1</sup>

We contribute to embeddedness theory by showing how individuals’ embeddedness impacts skilled migrants’ consideration of withdrawal from the host country following an external shock. We operationalise the concept of embeddedness, captured by an individual’s place of birth, citizenship, country of doctoral training, length of tenure and contractual arrangements, and identify their impact on the likelihood of the academic considering leaving the UK. We also extend our understanding of the concept of boundaryless career by addressing the question of how embeddedness influences the ‘boundarylessness’ (Guan et al., 2019) of foreign academics in the UK. In so doing, we identify how levels of academics’ research productivity influence academics’ consideration of emigration. We show that the majority of these academics consider Brexit to be harmful to their careers; and that the type of institution they work in is irrelevant to any such findings. We also show that those who were considering leaving the UK were more productive researchers.

## 2. Factors determining emigration considerations in response to Brexit

Despite considerable advances in careers research, the notion of career boundaries have attracted considerable attention (Inkson et al., 2012; Rodrigues et al., 2016; Guan et al., 2019). To date we know that institutional settings play a considerable role in determining professionals’ career choices (Kinsella et al., 2022). Increased job insecurity coupled with career uncertainty may lead to exploration of alternative career option both intra- and inter-organisations (Direnzo and Greenhaus, 2011; Inkson et al., 2012).

Moves across organisational, occupational, or geographical boundaries occur because individuals seek to advance their careers (Hall, 2002; Rosenbaum, 1984) and are the result of push and pull factors motivating mobility. While pull factors might be related to career opportunities outside the organisation, push factors include for example discrimination, harassment or non-inclusive cultures (Mainiero and Sullivan, 2005). Whilst Brexit may act as a push factor, embeddedness may influence academics’ decision to remain in the UK.

As a push factor, Brexit may have impacted academics (or led to their ‘discontent’) in several ways that contributed to their considering emigrating: Brexit may have an impact on their personal income, on their career progression, on their access to research funding – especially from the European Union,<sup>2</sup> an important funding source for many UK academics, accounting for between 20 and 38 % of overall funding by discipline in the years before the referendum (Marginson et al., 2020) – and generally to the feeling that the UK was becoming a more insular and a less welcoming country.

Embeddedness has been understood as a multifaceted construct with several dimensions. Social relations have been identified as a driving force for job embeddedness (Mitchell et al., 2001) which might buffer the effects of ‘push’ events, such as Brexit (Burton et al., 2010; Feldman et al., 2012), and enable individuals to capitalise on their careers where they are embedded (Rummel et al., 2019). Based on this argument, research has shown that frequency and recurrence of interactions within social network play an important role in individuals’ decision to relocate

<sup>1</sup> Results from Şanlıtürk et al. (2022) further suggest how STEM academics were less prone to international mobility even before the referendum, although the trend got stronger after it. Conversely, academics in social sciences have been less affected by the Brexit outcome both in terms of leaving and entering the UK.

<sup>2</sup> Indeed, the UK was the second highest receiver of funding under the Horizon 2020 scheme across EU member states, benefiting from about 12 % of the total budget according to HESA (Marginson et al., 2020; Meyers and Springford, 2022).

(Koelet et al., 2017).

We focus on a number of individual variables that may be important in determining whether academics would consider emigrating post-Brexit. Nationality has been seen as an indicator of one's level of social embeddedness (Portes and Sensenbrenner, 1993). Unlike native born individuals, migrants experience a number of constraints influencing their career advancements, as language barriers or lack of acknowledged educational and professional certificates may present additional challenges (Barrett et al., 1996; Peltokorpi and Xie, 2023). While we acknowledge that some of these variables may impact academics less than other category of workers, we assume that willingness to leave the UK after Brexit will differ dependent on whether academics are: UK-born; foreign-born but obtained citizenship prior to the Brexit referendum; or foreign-born and obtained citizenship after the Brexit referendum. The place of birth and time of naturalisation may result in distinct levels of social embeddedness, so we hypothesise:

**H1a.** UK-born academics are less likely to consider emigrating in response to Brexit than foreign-born academics born in the EU and foreign-born academic born outside the EU.

**H1b.** UK-born academics who also have another passport are more likely to consider leaving the UK in response to Brexit compared to those holding only a UK passport.

Following the embeddedness perspective (Portes and Sensenbrenner, 1993; Ng and Feldman, 2014), foreign-born academics who obtained UK citizenship prior to the Brexit referendum may be less rooted in their communities than native-born academics, so we posit:

**H1c.** Foreign-born academics who obtained UK citizenship prior to the Brexit referendum are more likely to have considered emigrating than native-born academics.

Using the same arguments, we assume that foreign-born academics who obtained UK citizenship after the Brexit referendum are likely to be less rooted in their communities than academics who obtained citizenship prior to the Brexit referendum. Whilst individuals naturalised prior to Brexit did so under different circumstances, individuals who got citizenship after Brexit were aware of the consequences of Brexit. Accordingly, we posit:

**H1d.** Foreign-born academics who obtained UK citizenship following the Brexit referendum are more likely to have considered emigrating than native-born academics or foreign-born academics who obtained UK citizenship prior to the Brexit referendum.

Further to nationality, place of birth and time of naturalisation, family composition may influence embeddedness and mobility (Dette and Dalbert, 2005). As individuals' mobility decisions have an impact on family members, employees may consider family members' preferences while making important career choices. For individuals with caring responsibilities for members of their family, such as dependent children or elder family members, mobility decisions may be impacted by factors other than just their career choices (Eby et al., 1999; van Ommeren et al., 2002). In general, individuals with a strong focus on family and career tend to prefer a stable home and community (Lee and Maurer, 1999). Kirchmeyer (2006) found that married couples fear that changes in their professional lives could impact their family lives. In our context, academics with dependent children or caring responsibilities for disabled or elder family members might be more socially embedded because dependents integrated into domestic contexts through schooling, disability or caring responsibilities will make emigration more disruptive or complicated.

**H2.** Academics with household dependents are less likely to have considered emigrating due to Brexit than those without dependents.

In addition to personal characteristics, work-related factors may shape mobility and embeddedness in various ways. At the organisational level,

HE institutions have different statuses (e.g., privilege, and prestige). Employing organisation status is a key indicator of individual's socioeconomic status (Lin et al., 1981; Zhou, 2005). Differences in institutional reputation are an important driver for some academics, with the reputation of universities, mainly based on their ability to offer resources for research, salary levels and the fit between position and research interests, playing roles in mobility and emigration (Agarwal and Ohyama, 2013; De Grip et al., 2010; Ivancheva and Gourova, 2011). In the HE sector, universities' reputations are closely linked to their research output and academics working in those research-intensive institutions are often highly productive, with skills that are transferable across organisations (Fugate et al., 2004). The development of human capital is likely to be positively associated with greater mobility (Feldman and Ng, 2007).<sup>3</sup> Further, academics in high reputable, innovative and research-intensive institutions establish their self-identity by comparing themselves with those whom they see as similar (Festinger, 1954; Stryker and Burke, 2000). They interact often with colleagues with similar interests and values and those networks often span several organisations (De Janasz and Sullivan, 2004) and geographic locations. Research-intensive institutions might accelerate emigration motivations as they offer access to resources relevant to successful career mobility. So:

**H3.** Those working in research-intensive institutions are more likely to have considered emigrating.

Based on arguments about skills and performance, Carless and Arnup (2011) suggested that employees with higher educational level were more likely to relocate – however others did not confirm such a correlation (Jones et al., 2005). Employees' performance and productivity may influence career mobility (Bekhradnia and Sastry, 2005). Careers transitions are in part based on career-related resources, such as identity, psychology, human capital and social connections (Hirschi, 2012). More specifically, individuals who engage with voluntary career transitions are often skilled professionals, such as technicians or managers (Feldman and Ng, 2007; Inkson et al., 2012; Kinsella et al., 2022).

Whilst career mobility of competent and highly productive employees might result in more beneficial outcomes for individuals (Lam et al., 2012; Ng et al., 2007), it is often a problem for organisations (Feldman and Ng, 2007; Griffeth et al., 2000) and for countries. The UK was a 'net exporter' of academics, but it was a net importer of higher 'quality' researchers (Bekhradnia and Sastry, 2005). The mobility of these individuals is particularly problematic as they encompass skills and competencies relevant to their careers (DeFillippi and Arthur, 1994; Peltokorpi and Xie, 2023). We adopt the argument that mobile researchers are, on average, more productive compared to their non-mobile colleagues (Aksnes et al., 2013; Cruz-Castro and Sanz-Ménendez, 2010). Therefore:

**H4.** Scholars who consider emigrating due to Brexit are more productive researchers.

Job-specific training would result in increased human capital investment, which may influence embeddedness positively, whereas investment in development of generalisable skills may enhance likelihood of career moves (Feldman and Ng, 2007). Time spent in education in a country is associated with human capital, the accumulation of career specific skills, which may result in greater embeddedness and lower interest to career mobility. Hence, we suggest, that the country in which individuals undertook their doctorate influences their social embeddedness (MORE, 2010), suggesting that those who obtained their doctorates abroad may be less socialised and embedded in the UK academic system (Ng and Feldman, 2014), or may have a greater ability to obtain

<sup>3</sup> As already noted above, although this may be particularly the case for academics working in STEM fields (van der Wende, 2015), STEM academics were found to be relatively less mobile internationally than peers in social sciences already before Brexit (Şanlıtürk et al., 2022).



employment outside the UK, being more credible as candidates:

**H5a.** Academics who obtained their doctorate from an institution outside the UK are more likely to have considered emigration due to Brexit.

**H5b.** Academics who obtained their doctorate from an institution in a nation state that is a member of the EU are more likely to have considered emigration due to Brexit than those who trained in a UK institution or elsewhere.

Career stage may be another relevant factor influencing career related moves. The UK has traditionally been an important destination for early career researchers, particularly from European countries (Bekhradnia and Sastry, 2005). However, early career scholars are likely to worry that “significant time abroad may result in their being out of the loop for junior positions, or that being absent might hurt their chances for tenure” (Walker, 2005, p. 30). In continental Europe and the USA, such academics require local rather than international personal connections to advance professionally (Jarausch, 2005), so:

**H6.** Early career researchers are more likely to have considered emigration due to Brexit.

Mitchell et al. (2001, p. 1104) conceived of embeddedness as a “broad constellation of influences on employee retention”. People remain in an organisation because of a combination of (a) their social attachments to colleagues or neighbourhood (b) their perception on their compatibility or engagement with the organisation or community; and (c) the psychological or material costs (sacrifices) of switching jobs. Length of stay is a signifier of embeddedness, in this case job embeddedness (Mitchell et al., 2001). Being with the same employer for a longer period of time and may display a higher level of organisational commitment (Allen and Meyer, 1993; Mathieu and Zajac, 1990) particularly after a major change (Meyer et al., 2018). Hence, we suggest that:

**H7.** The longer academics have been working in their current UK institution, the less likely it is that they will have considered emigration due to Brexit.

### 3. Methods, data and sample

#### 3.1. Data

We studied academics working at UK business schools and economics departments in November 2021. Business schools and economics departments constitute about 10 % of the total UK university academics.<sup>4</sup> We combined information from four sources: (1) business schools and economics department websites, (2) publication data from Scopus, (3) institutional data derived from HESA and the Higher Education Funding Council of England (HEFCE) and (4) survey data.

Though similar, there are differences in the makeup of our two groups, business schools and economists. First, economics and econometrics had a higher proportion of EU nationals than any other field in the UK, at 36 %. Indeed, only 33 % of the population in that field were UK citizens.<sup>5</sup> By comparison, the proportion of EU Business and Management scholars is

<sup>4</sup> 20,545 out of 220,530 academic staff at UK higher education providers allocated to Business & Management and Economics and Econometrics studies centred, according to the 2019/20 HESA Staff record (<https://www.hesa.ac.uk>).

<sup>5</sup> Data derived from Higher Education Statistics Agency (HESA) (2021).

close to the national average of 17 % but has a higher proportion of overseas nationals from outside the EU (22 %).<sup>6</sup> Second, economists make up a significant proportion of business and management, but also work elsewhere in universities – in independent economics departments or more interdisciplinary research groups. There are also similarities, particularly that business, management, and economics have high numbers of international fee-paying students and can provide competitive salary packages relative to their EU counterparts.

Our survey used a set of participants from an earlier 2020 survey, which contained a broadly representative sample the population of business, economics, and management academics working in the UK, in business schools and academic departments (reference to published work using that survey to be added but currently not included to maintain anonymity in the review process) who were willing to participate in further studies, in line with General Data Protection Regulation requirements of explicit consent. As our focus is upon consideration of migration or self-initiated expatriation, we exclude visiting scholars and post-doctoral appointments from the analysis.<sup>7</sup> To derive the survey we assembled several questions from prior research and developed bespoke questions where required. We piloted the first draft with ten academics and then fine-tuned the survey instrument, repeating the pilots with a smaller number of academics. Because the study included information that could potentially identify individuals (where individuals obtained their doctorate, citizenship, etc) and because we were linking the data to external data sources, we followed a multi-stage protocol to ensure the de-identification of the data that was explained to respondents. Files were individually password protected and held on secure servers to ensure that the data did not contain personal identifying information. We did not include questions relating to salary given sensitivities about providing such information, so captured relevant information indirectly through correlates such as institutional reputation, which in this context are closely tied to salary, as well as other correlates such as rank and research productivity.

We received 481 responses. Since the total sample for the survey was 1148 the response rate was over 40 %. 446 provided usable responses (38 %). We updated information on the original sample frame from websites, enabling and comparing these to the population of academics and tested the representativeness of our responses. The sample was consistent with the original population with regard to sex, academic rank, and type of institution though, as was the case with the 2020 survey, it has a slightly higher proportion of professors.

#### 3.2. Measures<sup>8</sup>

##### 3.2.1. Dependent variable

We asked participants the binary question of whether *Britain's exit from the EU led you to consider whether you would continue living in the UK?* That was coded 1 for those who responded that this was the case and 0 otherwise. Descriptive statistics and correlations with the dependent variable and the independent variables used in the analysis, which are measured on scales, are found in Table 2, which is discussed in the next section.<sup>9</sup>

<sup>6</sup> Compared to academics in STEM fields, those working in economics were more internationalised before the Brexit referendum. Conversely, STEM fields showed a similar level of internationalisation as business and management fields: as of 2016, almost 30 % of STEM academics were from outside the UK – 21.3 % from non-UK EU member states, 18.4 % from non EU countries according to HESA (2023).

<sup>7</sup> We also found that there were differences in whether institutions posted doctoral students and Visiting Academics on their websites, making it impossible to provide a consistent sample of these groups.

<sup>8</sup> The survey instrument is available on request to the corresponding author.

<sup>9</sup> The full correlation matrix is available on request to the lead author.

### 3.3. Independent variables

#### 3.3.1. Country of birth and citizenship

The survey asked if participants “were born in the UK”. We coded the variable “Born in the UK” as 1 if they were, 0 if they were born elsewhere. We also captured whether individuals are UK citizens and when they obtained citizenship, and used this information to derive three dummy variables. The first captures whether individuals are not born in the UK and have taken up UK citizenship. The second identifies individuals who have taken up UK citizenship following the result of the referendum in 2016, speculating that these individuals have made a commitment to continue to live and work in the UK beyond the UK's eventual withdrawal from the EU. Finally, we capture whether individuals who were born in the UK had applied for citizenship outside the UK following the Brexit referendum with a dummy variable for those who had done so being coded 1 for those that had and 0 for those that had not.

#### 3.3.2. Caring and dependents

Using survey responses, we defined a set of dummy variables equal to 1 if individuals recorded having a child under 18, or that they were a primary or secondary carer for a disabled child or adult, or that they were the primary or secondary carer for an adult of 65 years of age or older.

#### 3.3.3. Institutional differences

We capture institutions' orientation towards research using their Grade Point Average (GPA) derived from the REF2014 Summary for each unit of assessment (i.e. Unit 16 – Economics and Econometrics and Unit 19 – Business and Management).<sup>10</sup> We also derived a dummy variable, “Elite institutions”, that takes a value of one if individuals worked in either Oxford, Cambridge or in one of the three highly research-intensive London university colleges (Imperial College, the London School of Economics and University College London) (Heinze and Fuchs, 2022).

#### 3.3.4. Scholarly impact

Scholarly impact is highly skewed, with a few researchers making up the bulk of citations and published papers (Baum, 2012; Seglen, 1992). To proxy for such differences we, first, considered the total number of citations, as captured in their Scopus record. We then adjusted this based on the researchers' academic age, computed as the number of years since the year of their first publication. Second, given the focus of many academics on particular journal outlets (Heckman and Moktan, 2020; Walker et al., 2019), and that some researchers trade-off between journal publication and external impact (Salandra et al., 2022), we utilised journal ranking as a measure of academic influence. We used the ubiquitous AJG journal rankings: a scale including 4\* (highest), 4, 3, 2, and 1.<sup>11</sup>

#### 3.3.5. Training

Using survey response to the question “where did you receive your PhD?” we derived a binary variable equal to 1 if the individuals had earned their doctorate from a European university, and 0 otherwise. We also derive an analogous variable identifying whether individuals obtained their doctorate outside the UK or in the EU27.

#### 3.3.6. Career stage

Career stage was captured via academic ranks that were obtained from websites to create dummy variables for the ranks of Lecturer/

Assistant Professor; Associate Professor/Senior Lecturer/Reader/Principal Lecturer; Professors/Chairs; and Research Fellow/Senior Research Fellow. The residual group of ‘Other’ titles make up 2 % of scholars.

### 3.4. Organisational tenure

To measure the period of time individuals were employed in their current institutions, we asked participants “How long have you been employed in your present organisation?” The options ranged from “Less than 1 year” to “10 years or more”.

### 3.5. Control variables

We control for individual perceptions of how perceptions of Brexit impact on their consideration of emigration at the: 1. individual; 2. institutional, and 3. national levels. A multi-level view highlights the importance of institutional and national effects (Lepori et al., 2015) drawing from an expansive literature. At the individual level, six items drawn from across the literature (Bothwell, 2021; Guma and Jones, 2018; Falkingham et al., 2021; Lawson et al., 2019; Lepori et al., 2015; Mazzucato, 2018; Mayhew, 2017; Morgan, 2021; Peplow, 2019; Ríos, 2017; Sédès et al., 2021) assessed academics' perception of Brexit. Example items are ‘Has Brexit made your collaboration with co-authors and colleagues inside the European Union (EU) more difficult’ and ‘Has Brexit made you feel less comfortable about living in the UK’.

At the institutional level, six items, developed from the extant literature (e.g. Arora and Karthik, 2020; Barker, 2021; Bekhradnia and Sastry, 2005; Mayhew, 2017; Bauder, 2012; Gromek Broc, 2020; Courtois and Veiga, 2020; Kim, 2017; Osswald and Pierk, 2020; Sédès et al., 2021; Witze, 2016) assessed academics' perceptions of how Brexit had impacted their university and their position within it. Example items are ‘The restricted inflow and outflow of academics between the EU and the UK has had a negative impact on personal careers’ and ‘My institution will face increased social/professional isolation due to migration restrictions’.

At the national level, eight items assessed academic views of Brexit, developed from prior analyses (e.g. Teague and Donaghey, 2018; Steinberg, 2019; The Migration Observatory, 2022). Example items being whether Brexit would ‘strengthen social services’ and ‘attract qualified migrants and lead to labour shortages of manual migrants’.

Participants' responses to these questions were classified on a five-point scale that ranged from “Strongly disagree”, to “Strongly agree” with the responses to being elaborated in Table 1. It is clear from the table that the majority of participants considered that the Brexit's impacts was undermining themselves, to their institutions and to the UK more broadly. For example, more than seven out of ten participants (72 %) strongly disagreed that Brexit “has been the right thing for the UK.”

For the analysis, motivated by research conducted by Landis et al. (2000), we take the mean score across the categories to capture the unfavourable perceptions of Brexit at the individual, institutional and national levels. Reliability was also tested using the Cronbach alpha scale ( $\alpha = 0.89$ ,  $\alpha = 0.86$ ,  $\alpha = 0.92$  respectively). We take an analogous approach to derive a variable at the national level to capture favourable perceptions towards Brexit using the Cronbach alpha ( $\alpha = 0.86$ ). Table 1 summarises the items used.<sup>12</sup>

We also included a binary variable sex equal to 1 for male and 0 for female derived from individual's websites. We also included a variable related to perceived career mobility, namely job insecurity, obtained from the survey. The potential career shock motivated by Brexit may have resulted in individual perceptions of job insecurity (Luthra, 2021), relevant motivators for a decision to emigrate. We also capture whether

<sup>10</sup> HEFCE REF 2014, <http://results.ref.ac.uk>, accessed March 2022.

<sup>11</sup> The methodology for the AJG is found at [https://charteredabs.org/wp-content/uploads/2021/06/Academic\\_Journal\\_Guide\\_2021-Methodology.pdf](https://charteredabs.org/wp-content/uploads/2021/06/Academic_Journal_Guide_2021-Methodology.pdf) accessed 29/06/2022.

<sup>12</sup> We tested the reliability of the construct by deriving new variables using of factor analysis. However, we did not find that our results were altered, but that the goodness-of-fit measures supported our use of the mean measure.

**Table 1**Perceptions of how individual, institutional, and national concerns impact the impact of Brexit on working lives ( $N = 446$ ).

| Focus of survey question | Survey questions  | Disagree | Strongly Disagree | Neither agree nor disagree | Agree | Strongly Agree |
|--------------------------|---|----------|-------------------|----------------------------|-------|----------------|
| Individual               | * Has made my collaboration with co-authors and colleagues inside the European Union (EU) more difficult.                 | 10.5     | 9.8               | 33.0                       | 26.8  | 19.9           |
|                          | * Has led me to focus my research mostly on topics that relate to the UK economy and society.                             | 27.8     | 20.2              | 27.3                       | 21.3  | 3.4            |
|                          | * Has reduced the diversity of views and contributions in the classroom.  | 16.9     | 16.9              | 28.1                       | 25.3  | 12.8           |
|                          | * Has made me feel less comfortable about living in the UK.   | 14.2     | 7.1               | 11.2                       | 32.9  | 34.7           |
|                          | * Limits my mobility and career opportunities outside of the UK.  | 12.3     | 9.4               | 25.6                       | 24.0  | 28.8           |
|                          | * Undermined my confidence in applying for EU grants.   | 5.0      | 2.8               | 19.5                       | 31.7  | 41.1           |
| Institutional            | * We have experienced greater challenges in collaborating with colleagues in the EU.                                      | 6.2      | 6.2               | 36.5                       | 32.6  | 18.5           |
|                          | * Willingness to include international researchers from the EU in major UK-funded projects or grant bids has decreased.   | 6.0      | 9.2               | 47.8                       | 25.3  | 11.7           |
|                          | * The restricted inflow and outflow of academics between the EU and the UK has had a negative impact on personal careers. | 6.2      | 5.3               | 27.5                       | 36.5  | 24.5           |
|                          | * My institution aims to focus on stronger student recruitment from outside the EU.                                       | 2.3      | 5.5               | 31.1                       | 36.9  | 24.2           |
|                          | * The quality of UK scholarship will be negatively impacted by restricted movement of academics from the EU.              | 6.2      | 5.9               | 12.6                       | 30.9  | 44.4           |
|                          | * My institution will face increased social/ professional isolation due to migration restrictions.                        | 6.0      | 9.0               | 28.5                       | 33.8  | 22.8           |
| National                 | * Strengthen social services.   | 51.8     | 23.9              | 18.1                       | 5.5   | 0.7            |
|                          | * Weaken employment regulation.   | 4.6      | 8.9               | 17.9                       | 29.4  | 39.2           |
|                          | * Strengthen environmental regulation.  | 44.3     | 27.5              | 20.2                       | 6.7   | 1.4            |
|                          | * Reduce UK international trade.  | 5.0      | 7.6               | 10.1                       | 30.5  | 46.8           |
|                          | * Attract qualified migrants to the UK.   | 43.7     | 27.5              | 10.5                       | 13.5  | 4.8            |
|                          | * Lead to major labour shortages in manual jobs.  | 4.6      | 2.1               | 6.2                        | 30.6  | 56.6           |
|                          | * Lead to increased diversity of the population.  | 42.4     | 29.8              | 16.7                       | 6.4   | 4.6            |
|                          | * Has been the right thing for the UK.  | 72.5     | 11.0              | 7.8                        | 3.9   | 4.8            |

individuals were working in business schools, economics departments, or as parts of multidisciplinary departments/centres. We asked to what extent participants agreed with the statement: '*I feel insecure about the future of my job*'. This item was measured using a five-point Likert scale.

#### 4. Data analysis and results

Table 2 shows that 54 % of individuals felt that Britain's exit from the EU led them to consider whether they would continue living in the UK. 55 % of them were male, and 48 % of them were born in the UK. Table 2 highlights a number of interesting correlations between the dependent and independent variables with those that were significant at the 5 % level of significance being highlighted with an asterisk. For example, there is a significant negative pairwise correlation between individuals perceiving Brexit as a factor leading them to consider leaving the UK and individuals who were born in the UK of  $-0.25$ , while, interestingly, the foreign-born academics who obtained UK citizenship prior to the Brexit referendum were significantly more likely to consider leaving the UK while those who had obtained citizenship after the referendum were not. It is also clear that the correlations align to several of the hypothesis.

We estimate a set of probit models of the type:

$$E(Y_i|X_i, C_i) = P(Y_i = 1|X_i, C_i) = \Phi(\beta_0 + \beta_1 X_i + \beta_2 C_i) \quad (1)$$

where  $i$  denotes individual respondents,  $Y_i$  represents our independent variable,  $X_i$  denotes the vector of our explanatory variables and  $C_i$  is the vector containing all control variables. Table 3 reports the results of the probit analysis examining each of the seven sets of independent variables in turn along with sex, job insecurity and individual perceptions of how perceptions of Brexit impact on their consideration of emigration, and the department where they work (Model 1–7).<sup>13</sup> To ease comparison across specifications, rather than showing the estimated probit coefficients, we derive and provide marginal effects - where the probability

<sup>13</sup> Coherently, in models 1–7 vector  $X_i$  only includes the independent variable of interest (or the set of variables) in the specification.

of a change in the dependent variable  $y$  [i.e.  $P(Y_i = 1|X_i, C_i)$ ] given a unit increase in the value of the relevant dichotomous independent regressors ( $X_i$ ) holding all other regressors at their sample means.<sup>14</sup> We then provide an estimation of Eq. (1) including the full set of explanatory variables (Model 8). In general, the findings in that full estimation (Model 8) are qualitatively analogous to those found in each of the individual models, enabling us to focus on the final set of results. The only area where the findings are not then statistically well determined, falling below the standard 10 % levels, relate to nationality and citizenship, but we note that the coefficients are quite stable despite the rich specification being estimated.

The national variables are also well determined, with slightly lower rates of uptake. Country of birth has the largest quantitative impact on consideration of migration, with those born in the UK and not holding citizenship elsewhere being 27 % less likely to consider moving than those who are not UK nationals. However, those who were born in the UK, but who also held citizenship elsewhere, were 22 % more likely to consider emigrating due to Brexit. Those who have more recently become citizens are more likely to have considered moving (although the coefficient is not significant at conventional levels). In contrast, those who had taken up UK citizenship prior to 2016 were roughly half as likely to have considered relocation as those born in the UK. These findings largely confirm H1a, H1b, H1c and H1d although the coefficients are less precisely estimated with respect to H1b and H1d, being weakly supported at the lower 10 % level of significance.

We find that academics with children are 5 % less likely to consider emigrating, supporting H2. However, we do not find that those who are primary or secondary carers for disabled children or adults, or who are the primary or secondary carer for older adults, are any more or less likely to have considered emigrating due to Brexit than those without dependents.

Research quality, as captured by REF 2014 scores did not have a statistically significant impact on the dependent variable, leading to H3

<sup>14</sup> We also conducted an identical set of logit estimations but found that the results were qualitatively identical.



**Table 2**  
Summary Statistics including pairwise correlations with the Dependent Variables (N = 446).

|                                       |   | Mean  | Standard<br>Deviation | Min | Max   | Pairwise<br>Correlations |
|---------------------------------------|---|-------|-----------------------|-----|-------|--------------------------|
| Dependent variable                    | Has Britain's exit from the EU led you to consider whether you would continue living in the UK? | 0.54  | 0.50                  | 0   | 1     | 1                        |
| Country of birth & citizenship<br>(s) | Born in the UK  | 0.48  | 0.50                  | 0   | 1     | -0.2518*                 |
|                                       | Born in the EU  | 0.28  | 0.37                  | 0   | 1     | 0.23937*                 |
|                                       | Born outside the UK or EU   | 0.24  | 0.25                  | 0   | 1     | 0.04387                  |
|                                       | Born in the UK, but citizen of another country  | 0.06  | 0.24                  | 0   | 1     | 0.0659*                  |
|                                       | UK citizen who was not born outside the EU  | 0.20  | 0.40                  | 0   | 1     | 0.0868                   |
|                                       | Foreign-born academics who obtained UK citizenship prior to the Brexit referendum               | 0.09  | 0.28                  | 0   | 1     | 0.1498*                  |
| Dependent family members              | Foreign-born academics who obtained UK citizenship following the Brexit referendum              | 0.02  | 0.16                  | 0   | 1     | -0.0609                  |
|                                       | Child under 18  | 0.17  | 0.36                  | 0   | 1     | -0.108*                  |
|                                       | Primary or secondary carer for disabled child or adult  | 0.01  | 0.11                  | 0   | 1     | 0.0408                   |
| Research Quality                      | Primary or secondary carer for adult (65+ years)  | 0.12  | 0.33                  | 0   | 1     | -0.0505                  |
|                                       | Departmental Ranking in REF2014   | 33.95 | 24.07                 | 1   | 96    | -0.0502                  |
| Academic influence                    | Elite institutions  | 0.06  | 0.20                  | 0   | 1     | 0.0154                   |
|                                       | Citations (age adjusted)  | 9.52  | 32.19                 | 0   | 462.5 | 0.0956*                  |
|                                       | No. of publications in '3-rated' journals   | 0.08  | 0.23                  | 0   | 6.5   | -0.0595                  |
| Training                              | No. of publications in '4-rated' journal  | 0.20  | 0.56                  | 0   | 2.5   | 0.1075*                  |
|                                       | Obtained PhD in EU institution  | 0.11  | 0.31                  | 0   | 1     | 0.2181*                  |
| Academic Rank                         | Obtained PhD outside the UK and EU  | 0.08  | 0.27                  | 0   | 1     | -0.0229                  |
|                                       | Lecturer  | 0.23  | 0.42                  | 0   | 1     | 0.0584                   |
|                                       | Associate Professor   | 0.36  | 0.48                  | 0   | 1     | 0.0146                   |
|                                       | Professor   | 0.27  | 0.44                  | 0   | 1     | -0.0486                  |
|                                       | Research Fellow/ Senior Research Fellow   | 0.07  | 0.26                  | 0   | 1     | -0.0667                  |
|                                       | Teaching Intensive  | 0.06  | 0.24                  | 0   | 1     | -0.0004                  |
| Tenure                                | Other   | 0.02  | 0.13                  | 0   | 1     | 0.058                    |
| Sex                                   | No. of years in post  | 7.11  | 3.54                  | 1   | 11    | -0.1355*                 |
| Brexit influence on working<br>life   | Sex (Ref. Male)   | 0.55  | 0.50                  | 0   | 1     | -0.0667                  |
|                                       | Individual (consider Brexit's impacts were unfavourable)  | 3.35  | 0.88                  | 1   | 5     | 0.4577*                  |
|                                       | Institutional (consider Brexit's impacts were unfavourable)                                     | 3.65  | 0.80                  | 1   | 5     | 0.4565*                  |
|                                       | National (consider Brexit's impacts were unfavourable)  | 1.95  | 0.81                  | 1   | 5     | -0.3988*                 |
| Department/School                     | National (consider Brexit impacts were favourable)  | 4.09  | 0.86                  | 1   | 5     | 0.2990*                  |
|                                       | Economics department  | 0.16  | 0.29                  | 0   | 1     | -0.0214                  |
|                                       | Business School   | 0.75  | 0.43                  | 0   | 1     | 0.0203                   |
|                                       | Interdisciplinary department  | 0.09  | 0.37                  | 0   | 1     | -0.0084                  |
| Insecurity                            | I feel insecure about the future of my job  | 2.68  | 1.19                  | 1   | 5     | 0.1128*                  |

\* Indicates significant at 5 %.

being rejected. Nor did we find that there were statistically significant differences for the Oxbridge and elite London based institutions. Those finding suggests that Brexit's impact on emigration was broadly felt. Academics who have more scholarly impact, as measured by their publications in top, 4-rated outlets, are more likely to consider leaving the UK. However, age adjusted citations did not have a statistically well determined impact on perceptions, perhaps reflecting the focus of these fields on journals outlets (Heckman and Moktan, 2020; Salter et al., 2021). These findings generally support H4.

Obtaining a doctorate from an EU27 based institution (that is an institution in the European Union, excluding the UK), rather than one in the UK, increases the likelihood of individuals considering leaving the UK by 24 %, which confirms H5b. However, researchers who obtained their doctorates from countries outside the EU or the UK were no more nor less likely to have considered leaving the Britain due to Brexit, which refutes H5a. Contrary to what we expected in H6, early career researchers were no more nor less likely to consider moving. Higher levels of job insecurity led to individuals being more likely to be considering leaving the UK. Those with a longer tenure are less likely to consider leaving, which supports H7.<sup>15</sup> Finally, in examining the control

variables, we find that individual, institutional and national concerns were drivers of preferences with institutional effects being quantitatively most important. In particular, we find that where participants considered that Brexit negatively impacted upon them, they were *more* likely to consider "Britain's exit from the EU led you to consider whether you would continue living in the UK" for the individual and institutional constructs. However, when we look across the rationales that are posited at the national-level we find that those who perceived Brexit to be beneficial were *less* likely to consider emigrating, as we would expect. However, where participants considered that Brexit negatively impacted at the national level, they were more likely to consider emigrating: the coefficient, while intuitively signed, albeit with a considerably lower coefficient, was not statistically well determined.

In addition, there is no evidence that either sex was more likely to consider emigration. Nor was there was an influence from the environment where scholars work – i.e. whether in business schools, economics departments, or as parts of multidisciplinary departments/centres.

## 5. Discussion and conclusion

Examining the results of the Brexit referendum, it is clear that those with higher education voted against it by a considerable majority; three-quarters of them voted to remain within the EU (Swales, 2016). Universities UK and academics in general, with few exceptions, "sounded concern and in some cases near panic" at the prospect of Britain exiting the EU (Mayhew, 2017, pp. S155). Although research indicates that broad views are socialised quite early (Lancee and Sarrasin, 2015), in the specific political circumstances of Brexit Hainmueller and Hiscox (2006) argued that academics, and in particular economists, have

<sup>15</sup> Based on the recommendation of one of the referees we also examined whether there were differences the perceptions of elite scholars (defined as those who published in 4\* outlets and had longer tenure) who were born in the EU and those born in the UK. To do so we interacted these variables with the tenure variable and the variable capturing those who published in 4\* outlets creating two variables for each – one for those born in the EU and another for those born in the UK. We then tested if there was a difference in the coefficients using *t*-tests but found did not find they were statistically different.

Table 3

Brexit's impact on emigration considerations: probit estimates (marginal effects reported - N = 446).

|  |   | 1     |        | 2      |        | 3      |        | 4      |        | 5      |        | 6      |        | 7      |        | 8      |        |        |        |       |     |        |       |     |        |
|--|---|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-----|--------|-------|-----|--------|
|  |   | Coeff | z-stat | Coeff  | z-stat | Coeff  | z-stat | Coeff  | z-stat | Coeff  | z-stat | Coeff  | z-stat | Coeff  | z-stat | Coeff  | z-stat |        |        |       |     |        |       |     |        |
| Country of birth<br>(born outside the<br>UK or EU) | Born in the UK  | −0.32 | ***    | (5.52) |        |        |        |        |        |        |        |        |        |        |        | −0.27  | ***    | (4.15) |        |       |     |        |       |     |        |
|  | Born in the EU  | 0.25  | **     | (2.28) |        |        |        |        |        |        |        |        |        |        |        | 0.26   | **     | (2.03) |        |       |     |        |       |     |        |
| Citizenship(s)<br>(Ref. foreign<br>citizen)        | Born in the UK, but citizen of<br>another country   | 0.23  | *      | (1.85) |        |        |        |        |        |        |        |        |        |        |        | 0.22   | *      | (1.62) |        |       |     |        |       |     |        |
|  | Foreign-born academics who<br>obtained UK citizenship prior<br>to the Brexit referendum     | 0.25  | ***    | (2.35) |        |        |        |        |        |        |        |        |        |        |        | 0.22   | *      | (1.68) |        |       |     |        |       |     |        |
|  | Foreign-born academics who<br>obtained UK citizenship<br>following the Brexit<br>referendum | −0.16 | **     | (1.96) |        |        |        |        |        |        |        |        |        |        |        | −0.13  |        | (1.27) |        |       |     |        |       |     |        |
| Dependents   | Child (under the age of 18)   |       |        | −0.05  | **     | (2.05) |        |        |        |        |        |        |        |        |        | −0.05  | ***    | (2.02) |        |       |     |        |       |     |        |
|  | Primary or secondary carer for<br>disabled child or adult                                   |       |        | 0.26   |        | (1.11) |        |        |        |        |        |        |        |        |        | 0.16   |        | (0.62) |        |       |     |        |       |     |        |
|  | Primary or secondary carer for<br>adult (65+ years)   |       |        | −0.02  |        | (0.32) |        |        |        |        |        |        |        |        |        | 0.01   |        | (0.08) |        |       |     |        |       |     |        |
| Research quality                                   | Departmental Ranking in<br>REF2014  |       |        |        |        | 0.00   |        | (0.86) |        |        |        |        |        |        |        | 0.00   |        | (0.40) |        |       |     |        |       |     |        |
| Scholarly impact                                   | Elite institutions  |       |        |        |        | −0.02  |        | (0.17) |        |        |        |        |        |        |        | −0.01  |        | (0.09) |        |       |     |        |       |     |        |
|  | Number of publications in ‘4-<br>rated’ journal (age adjusted)                              |       |        |        |        |        |        | 0.29   | **     | (2.32) |        |        |        |        |        | 0.28   | **     | (2.04) |        |       |     |        |       |     |        |
|  | Number of publications in ‘3-<br>rated’ journals (age adjusted)                             |       |        |        |        |        |        | 0.01   |        | (0.22) |        |        |        |        |        | 0.00   |        | (0.01) |        |       |     |        |       |     |        |
|  | Citations (age adjusted) (000<br>s)   |       |        |        |        |        |        |        |        |        |        |        |        |        |        | 0.04   |        | (1.42) |        |       |     |        |       |     |        |
| Training   | Obtained PhD in EU<br>institution   |       |        |        |        |        |        |        |        | 0.34   | ***    | (3.29) |        |        |        | 0.24   | *      | (1.98) |        |       |     |        |       |     |        |
|  | Obtained PhD outside the UK<br>and EU   |       |        |        |        |        |        |        |        | 0.02   |        | (1.59) |        |        |        | 0.02   |        | (0.20) |        |       |     |        |       |     |        |
| Academic Rank<br>(Ref. Professor)                  | Lecturer  |       |        |        |        |        |        |        |        |        |        | 0.06   |        | (0.87) |        | −0.06  |        | (0.60) |        |       |     |        |       |     |        |
|  | Associate Professor   |       |        |        |        |        |        |        |        |        |        | 0.04   |        | (0.56) |        | −0.02  |        | (0.18) |        |       |     |        |       |     |        |
|  | Research Fellow/ Senior<br>Research Fellow  |       |        |        |        |        |        |        |        |        |        | −0.05  |        | (0.39) |        | −0.04  |        | (0.22) |        |       |     |        |       |     |        |
|  | Teaching Intensive  |       |        |        |        |        |        |        |        |        |        | 0.05   |        | (0.42) |        | 0.00   |        | (0.00) |        |       |     |        |       |     |        |
|  | Other   |       |        |        |        |        |        |        |        |        |        | 0.24   |        | (1.36) |        | 0.10   |        | (0.47) |        |       |     |        |       |     |        |
| Tenure   | No. of years in role  |       |        |        |        |        |        |        |        |        |        |        |        | −0.02  | **     | (2.55) | −0.03  | ***    | (3.34) |       |     |        |       |     |        |
| Control variables                                  |   |       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |     |        |       |     |        |
| Demographic<br>variables                           | Sex (Ref. Male)   | −0.06 |        | (1.09) | −0.05  |        | (0.96) | −0.06  |        | (0.00) | −0.04  |        | (0.76) | −0.04  |        | (0.89) | −0.05  |        | (0.96) | 0.02  |     | (0.37) |       |     |        |
| Brexit influence on<br>working life                | Individual (consider Brexit's<br>impacts were unfavourable)                                 | 0.15  | **     | (2.53) | 0.13   | **     | (2.36) | 0.12   | **     | (0.00) | 0.11   | **     | (1.98) | 0.12   | **     | (2.07) | 0.13   | **     | (2.21) | 0.15  | *** | (2.57) | 0.14  | **  | (2.13) |
|  | Institutional (consider Brexit's<br>impacts were unfavourable)                              | 0.13  | ***    | (2.06) | 0.16   | ***    | (2.60) | 0.17   | ***    | (0.00) | 0.16   | ***    | (2.67) | 0.17   | ***    | (2.70) | 0.16   | **     | (2.53) | 0.17  | *** | (2.62) | 0.17  | *** | (2.39) |
|  | National (consider Brexit's<br>impacts were unfavourable)                                   | 0.05  |        | (1.45) | 0.04   |        | (1.15) | 0.05   |        | (0.00) | 0.04   |        | (1.27) | 0.05   |        | (1.20) | 0.03   |        | (0.96) | 0.04  |     | (1.13) | 0.07  | *   | (1.81) |
|  | National (consider Brexit<br>impacts were favourable)                                       | −0.12 | ***    | (2.64) | −0.11  | ***    | (2.47) | −0.13  | ***    | (0.00) | −0.11  | ***    | (2.86) | −0.11  | **     | (2.49) | −0.13  | ***    | (2.93) | −0.11 | **  | (2.34) | −0.11 | *** | (2.22) |
|  | Has been the right thing for<br>the UK  | −0.01 |        | (0.15) | −0.01  |        | (0.46) | −0.02  |        | (0.00) | −0.02  |        | (0.75) | −0.01  |        | (0.40) | −0.02  |        | (0.49) | −0.02 |     | (0.73) | −0.01 |     | (0.09) |

(continued on next page)

Table 3 (continued)

|                        | 1      |           | 2      |           | 3      |           | 4      |           | 5      |            | 6      |            | 7      |           | 8      |           |
|------------------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|------------|--------|------------|--------|-----------|--------|-----------|
|                        | Coeff  | z-stat    | Coeff  | z-stat    | Coeff  | z-stat    | Coeff  | z-stat    | Coeff  | z-stat     | Coeff  | z-stat     | Coeff  | z-stat    | Coeff  | z-stat    |
| Insecurity of my job   | 0.06   | ** (2.28) | 0.06   | ** (2.31) | 0.05   | ** (2.31) | 0.06   | ** (0.00) | 0.05   | *** (1.97) | 0.05   | *** (2.52) | 0.05   | ** (2.33) | 0.05   | ** (2.37) |
| Department/School      | -0.02  | (0.15)    | -0.03  | (0.36)    | -0.04  | (0.36)    | -0.04  | (0.00)    | -0.02  | (0.75)     | -0.02  | (0.76)     | -0.01  | (0.56)    | 0.02   | (1.26)    |
| (Ref. business school) | -0.02  | (0.01)    | -0.07  | (0.92)    | -0.02  | (0.92)    | -0.03  | (0.00)    | -0.01  | (1.14)     | -0.01  | (0.75)     | -0.01  | (0.52)    | -0.02  | (0.52)    |
| Log likelihood         | -197.1 |           | -203.8 |           | -213.9 |           | -211.0 |           | -209.2 |            | -214.0 |            | -205.9 |           | -179.4 |           |

Notes: For probit estimations, coefficients are estimated marginal effects ( $\partial F / \partial x_k$ ), i.e., the marginal effect of the value of the relevant dichotomous regressor ( $x_k$ ) holding all other regressors at their sample means. The discrete change in probability is reported for binary regressors. z-statistics are reported and are derived using robust standard errors.

\* Significant at 10 %.

\*\* Significant at 5 %.

\*\*\* Significant at 1 %.

'educated preferences', being likely to be well informed and able to update their views based upon new information. Hence, it is reassuring for the representativeness of our data that our results indicate similar views. However, we are able to show that these views have gone a step further and, for most academics in our field, indicated that Brexit has led to them considering leaving the UK.

Integrating embeddedness theory with boundaryless career perspectives, we developed and examined the effects of Brexit on academics' emigration considerations. Our findings advance understanding on the relationship between embeddedness and physical career mobility.

As [Granovetter \(1985\)](#) argued, social relationships offer material, social and psychological resources, thus shaping their mobility choices. We contribute to this understanding by showing that individual, institutional and national concerns were drivers of preferences, with institutional effects being most important. This is in the context that the bulk of participants did not see Brexit leading to a positive outcome. Indeed, only 8.7 % of those surveyed considered Brexit had been 'the right thing to do'. It is worth putting this into context. Prior to Brexit, the UK had, amongst sixteen developed economies, the smallest proportion of scientists intending to return home ([Franzoni et al., 2012](#)). However, the boundaryless career literature highlights that career resources ([Hirschi, 2012](#)) are critical in determining perceptions of migration, with research showing that individuals with higher educational degrees and advanced professional skills are more likely to relocate ([Hainmueller and Hiscox, 2007](#)). We deliver evidence from the HE sector supporting these claims.

Whether willingness to consider leaving the UK transfers into emigration is of course dependent on opportunity and other factors; our results do not suggest that Brexit has yet had an impact in net migration terms. Our understanding of the factors explaining individual's career decisions is long-standing ([Super, 1953](#)). While these earlier theories focused on factors such as individual traits, needs, life stages and gender, more recent theories ([Kiazad et al., 2020](#)) have focused on factors motivating career choices and behaviours beyond present organisational boundaries. Despite their usefulness, understanding the career mobility of academics following external change remains under-researched. A major focus of the theories that we have was on the prototypical premise of the Western male ([Leung, 2014](#)), so the career mobility of minorities and immigrants has been largely ignored. Immigrants are different from native citizens ([Bhagat and London, 1999](#)) in the sense that their embeddedness within the job, organisation or host society may differ from the general population. From this perspective, existing career theories tend to overlook the role of social embeddedness in explaining career mobility decisions. As evidenced in this study, citizenship plays a critical role in academics' consideration of emigration. Our emphases on place of birth and citizenship are consistent with the notion that foreign-born or distinct citizenship have a significant impact on career mobility ([Bonache et al., 2016](#); [Samnani et al., 2012](#)). We provide evidence that being embedded in the social environment is a critical antecedent of consideration of emigration.

Our focus on embeddedness and boundaryless career intentions offers novel insights into academics' career mobility. Interestingly, our results suggests that social embeddedness with either place of birth or nationality triggers certain career-related moves. This could be explained by the fact that non-British academics may experience higher levels of challenge to access resources, legitimacy or social support following Brexit.

Following [Portes and Sensenbrenner \(1993\)](#) argument on how individual characteristics and social structures influence physical mobility, our findings show how academics' individual and occupational factors influence their consideration of emigration. We found that the place in which doctorates were obtained affects career decisions to leave the host country. We did not find that career stage impacted on these considerations, but tenure did. Academics' career decisions are not only a result of available resources, but they are determined by their social embeddedness - which is challenged by Brexit.

We also find that Brexit plays a greater role in consideration of the possibility of emigrating than organisational reputation. We specifically elucidated the impact of social embeddedness, consistent with the [Granovetter \(1985\)](#) arguments that individuals are embedded in social and relational ties. Hence, these insights enhance our understanding of social embeddedness and boundaryless career shaping academics' careers choices in the UK.

### 5.1. Policy and managerial implications

Individual's perceptions of how Brexit has influenced, or will influence, the institution where they work is potentially highly significant as it provides an opening for decision makers to think innovatively about how to support their staff in order to retain them – perhaps providing greater administrative and personal support ([Sédès et al., 2021](#)) to enable staff to work outside the UK, as one of the potential benefits that the literature suggests can be obtained from 'working from anywhere' ([Choudhury et al., 2021](#)).

On the other side of the coin, the apparent dissatisfaction reported by these participants may offer an opportunity for HE institutions outside the UK to 'head hunt' UK-based academics. Our findings suggest that, for such institutions, those who were born outside of the UK, or who have only recently obtained citizenship, may be a good labour source. However, unlike the UK, which has traditionally been quite open to migrants and has an active internal labour market, university labour markets in some EU countries are notoriously difficult to break into, and it can be rare for scholars even to obtain positions in other institutions in the same country. For example, it has been argued that Italian and Portuguese academic systems possess "feudal-like" hierarchies which disadvantage scholars from abroad and can be detrimental to careers ([Morano-Foadi, 2005](#), pp. 149), with high levels of internal hiring ([Horta, 2009](#)). Similarly, in the French state university system, academic career patterns tend to be very localised, with a large proportion of scholars obtaining posts in the institutions where they did their doctorates ([Kim, 2008](#)). However, over recent years there have been policy responses to promote migration of academics in a number of European countries. For instance, Italian universities offer generous tax incentives to retain both Italian researchers who have been living abroad, as well as non-Italians, to move to Italian institutions ([Agenzia delle Entrate, 2018](#)). Our findings suggest the ability of European institutions to entice excellent scholars from the UK depends not only on financial incentives, but on their ability to support candidates with families.

The argument that on the European continent early career researchers require local rather than international networks to advance professionally ([Jarausch, 2005](#)) also aligns with our finding that those who have obtained doctorates in EU27 countries are more likely to obtain posts via greater socialisation and networks and hence able to obtain posts outside the UK ([MORE, 2010](#)). Brexit alters the decision-making calculus for young researchers, as it may well lead to pivoting of research priorities towards more domestically focused initiatives, or of research funding away from large-scale EU projects. These will reduce the number of earlier career researcher opportunities and managers in HE could develop initiatives to minimise this trend.

The combination of potential emigration of established scholars based in the UK and a reduction in the number of early career researchers places an additional onus upon UK institutions to find ways to retain staff. Across several dimensions, greater levels of embeddedness can assist in allaying negative perceptions. In particular, the length of tenure, having been trained in the UK (or elsewhere outside the EU), being born in the UK, having obtained UK citizenship prior to Brexit, all lead to individuals being less likely to consider emigrating when faced with the consequences of Brexit. On the other hand, those who obtained citizenship after Brexit were more likely to consider leaving and many may have obtained citizenship to shore up their ability to remain in their posts in the short term, thus keeping their options open. A key, and surprising, finding was the extent to which non-EU non-UK citizens were

almost equally likely to consider leaving the UK because of Brexit. Indeed, those who were born in the UK, but who also held citizenship elsewhere, were 22 % more likely to consider emigrating due to Brexit. It does not appear that non-EU citizens have bought into the concept of a 'Global Britain'. These tendencies underline the need for managers in HE to support potential foreign faculty and provide a working environment that enables them to meet their career aspirations.

There has been some encouragement by policy makers in the UK to try and mitigate the loss of 'talent'. The Global Talent visa scheme ([HM Government, 2021](#)) has been extended, with academics being one of the three eligible categories, although the scheme has not had a great deal of impact ([Rawlinson, 2021](#)). However, our findings suggest that more needs to be done to retain highly qualified scholars as well as encouraging new immigrants, particularly given that higher 'quality' faculty are more disaffected and, in a competitive labour market, are more difficult to replace.

We did not find differences between staff in high status, and typically better paying, institutions ([HESA, 2021](#)) and other universities. Nor did we find differences in subject areas or in different environments within business schools and associated departments. Instead, we find concerns across the sector that may reflect how pervasively and particularly Brexit is viewed. These findings imply that it is not only the more internationally focused institutions that need to be conscious of, and responsive to, the potential effects of Brexit on an organisation's ability to retain faculty – concerns about Brexit are found across the sector. National policy makers need to incentivise the higher education system to ensure its longer-term competitiveness.

### 5.2. Limitations and future research

Given that the outcome of the Brexit process is only gradually coming into focus, our work is exploratory, with a number of limitations allowing for future research possibilities to be explored. One is that, whilst the Brexit decision was decided at the referendum, its implementation has unfolded over an extended period, mixed with the impacts of the COVID-19 pandemic and the Ukraine war. While we were careful to time our study so that sufficient time had passed to enable participants to provide a considered assessment of many of the ramifications that Brexit had on academics career mobility, our cross-sectional design does not enable us to examine the dynamics of the Brexit process. It would have been useful to have had some prior data on pre-Brexit consideration of leaving the UK. The finding that those who obtained citizenship after 2016 were more likely to have considered emigrating from the UK does indicate that there would be value in better understanding how perceptions and rationale differ between individuals who arrived in the country at different times. Our work examines individuals' attitudes and not their actual behaviours and, as ever with perceptions of the possibility of job change, they need to be measured against actual job change in the future ([Ajzen et al., 2004](#)). Future research examining the migratory decision-making processes of those who have migrated would be valuable, but is outside the scope of the current study.

This study suggests several pathways for future research. In particular, the hypotheses developed here advance theoretical perspectives regarding 'whether', 'when' and 'how' social embeddedness becomes a driver of academics' career decisions. Future studies could explore other means by which embeddedness impacts career mobility. For example, organisational scholars can explore the extent to which individual psychology mitigates the results. We do not examine what persuaded scholars to move to the UK in the first place. Given that there was a rise in the number of scholars in UK universities coming from European countries between 2014 and 2019, it would also be interesting to study the reasons for their arrival, and whether the UK's internal labour market plays an important role in retaining high quality scholars. Earlier work highlighted that, not only did UK researchers returning from overseas have higher academic productivity, but also that they maintained their publishing networks ([Bekhradnia and Sastry, 2005](#)).



Whether these mechanisms can be sustained following Brexit is an open question. While our study provides pieces of the puzzle, as we did not capture emigrants across the period or identify how the internal labour market impacts migration, we can only provide an incomplete picture of migratory patterns and how they are affected by the Brexit process. The literature, both with respect to Brexit, and more broadly in relation to migration, has considerable scope for development.

Finally, our approach focuses on business, management and economic academics, and therefore we are unable to comment on how other fields of research responded to Brexit. Although there is no obvious reason to believe that our respondents are unusual, future research could explore whether the preference for emigration is similar in other research fields, particularly in the base and applied sciences where differences in salary packages may be less significant.

## CRediT authorship contribution statement

**Chris Brewster:** Writing – original draft, Writing – review & editing. **Rita Fontinha:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing. **Washika Haak-Saheem:** Writing – original draft, Writing – review & editing. **Fabio Lamperti:** Data curation, Writing – original draft, Writing – review & editing. **James Walker:** Conceptualization, Formal analysis, Writing – original draft, Writing – review & editing.

## Declaration of competing interest

The authors have no conflicts of interest to declare with respect to Linking Embeddedness to Physical Career Mobility: How Brexit Affected Academics' Willingness to Stay in the UK.

## Data availability

The data that has been used is confidential.

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